



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2021-0839; Project Identifier MCAI-2020-01697-R;

Amendment 39-21877; AD 2021-26-18]

RIN 2120-AA64

Airworthiness Directives; Airbus Helicopters

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA is superseding Airworthiness Directive (AD) 2020-21-01 for certain Airbus Helicopters Model AS-365N2, AS 365N3, EC 155B, EC155B1, and SA-365N1 helicopters. AD 2020-21-01 required modifying the main gearbox (MGB) tail rotor (T/R) drive flange installation. This AD was prompted by several reported occurrences of loss of tightening torque of the Shur-Lok nut, which serves as a retainer of the MGB T/R drive flange. This AD continues to require modifying the MGB T/R drive flange installation, and includes additional helicopters in the applicability for the required actions. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of certain other publications listed in this AD as of November 12, 2020 (85 FR 63440, October 8, 2020).

ADDRESSES: For service information identified in this final rule, contact Airbus Helicopters, 2701 North Forum Drive, Grand Prairie, TX 75052; phone: (972) 641-0000 or (800) 232-0323; fax: (972) 641-3775; or at <https://www.airbus.com/helicopters/services/support.html>. You may view this service information at the FAA, Office of the

Regional Counsel, Southwest Region, 10101 Hillwood Pkwy, Room 6N-321, Fort Worth, TX 76177. For information on the availability of this material at the FAA, call (817) 222-5110. It is also available at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0839.

Examining the AD Docket

You may examine the AD docket at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0839; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, the European Union Aviation Safety Agency (EASA) AD, any comments received, and other information. The address for Docket Operations is U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT: Andrea Jimenez, Aerospace Engineer, COS Program Management Section, Operational Safety Branch, Compliance & Airworthiness Division, FAA, 1600 Stewart Ave., Suite 410, Westbury, NY 11590; phone: (516) 228-7330; email: andrea.jimenez@faa.gov.

SUPPLEMENTARY INFORMATION:

Background

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to supersede AD 2020-21-01, Amendment 39-21274 (85 FR 63440, October 8, 2020) (AD 2020-21-01). AD 2020-21-01 applied to certain Airbus Helicopters Model AS-365N2, AS 365N3, EC 155B, EC155B1, and SA-365N1 helicopters. The NPRM published in the *Federal Register* on September 30, 2021 (86 FR 54139). In the NPRM, the FAA proposed to continue to require modifying the MGB T/R drive flange installation, and also proposed to include additional helicopters in the applicability for the required actions. The NPRM was prompted by several reported occurrences of loss of tightening torque of the Shur-Lok nut, which serves as a retainer of the MGB T/R drive flange.

EASA AD 2020-0287, dated December 21, 2020 (EASA AD 2020-0287), was issued by EASA, which is the Technical Agent for the Member States of the European

Union, to correct an unsafe condition for certain AS 365 N2, AS 365 N3, SA 365 C1, SA 365 C2, SA 365 C3, SA 365 N and SA 365 N1 helicopters; and all EC 155 B and EC 155 B1 helicopters. Model SA 365 C3 helicopters are not certificated by the FAA and are not included on the U.S. type certificate data sheet; this AD therefore does not include those helicopters in the applicability. EASA AD 2020-0287 supersedes EASA AD 2020-0212, dated October 5, 2020, which required modification of the MGB T/R drive flange installation. EASA advises of reported occurrences of loss of tightening torque of the Shur-Lok nut, which serves as a retainer of the T/R drive flange of the MGB. EASA also advises of subsequent investigation that determined that these occurrences were the result of failure of the Shur-Lok nut locking function, which is normally ensured by two antirotation tabs engaged into two slots at the end of the MGB output shaft pinion. EASA states this condition could lead to the loosening of the Shur-Lok nut and disengagement of the Shur-Lok nut threads, possibly resulting in reduction of T/R drive control, rear transmission vibrations, and subsequent reduced control of the helicopter.

Accordingly, EASA AD 2020-0287 retains the modification of the MGB T/R drive flange installation. EASA AD 2020-0287 also includes additional helicopters in the applicability for the required actions (Model SA-365C1, SA-365C2, and SA-365N helicopters on which Airbus Helicopters modification 0763B64 has been embodied; and Model EC 155B and EC155B1 helicopters without modification 0763B64 embodied).

Discussion of Final Airworthiness Directive

Comments

The FAA received comments from three commenters. The commenters were an individual who made a statement about the applicability; an individual who expressed support and favor for the NPRM; and an anonymous commenter, who had a question about the applicability. The following presents the comments received on the NPRM and the FAA's response to each comment.

Request for Clarification of Applicability

An individual stated the opinion that all helicopters should be subject to the same rules, a preference for unity under the law, and that it is unfair to have different rules for different helicopters. An anonymous commenter asked why the NPRM is only applicable

to Airbus Helicopters and not other current and modern models of helicopters. The FAA infers that the commenters may be suggesting that this AD should apply to all helicopter models. No further justification was given.

The FAA agrees to clarify the applicability. Each FAA AD has a specific applicability, and this FAA AD reflects the applicability of EASA AD 2020-0287. This AD only addresses the models specified in the EASA AD that are affected by the unsafe condition. Helicopters and the systems that support the design are varied, and because of design variances between manufacturers, may or may not be subject to an unsafe condition. Therefore, in crafting a rule, the FAA specifically works to apply rulemaking only to the models and systems that are affected. Otherwise, the FAA may be creating arbitrary regulations, unnecessary work, and burdensome costs for the operators of the unaffected helicopters. There is no further need to expand the applicability of this AD to other helicopter models due to the likelihood that the type designs are different and therefore not subject to the unsafe condition. If information is received indicating other models are affected by the unsafe condition, the FAA will consider further rulemaking. The FAA has made no changes to this AD.

Conclusion

These helicopters have been approved by EASA and are approved for operation in the United States. Pursuant to the FAA's bilateral agreement with the European Union, EASA has notified the FAA about the unsafe condition described in its AD. The FAA reviewed the relevant data, considered the comments received, and determined that air safety requires adopting this AD as proposed. Accordingly, the FAA is issuing this AD to address the unsafe condition on these helicopters. Except for minor editorial changes, this AD is adopted as proposed in the NPRM. None of the changes will increase the economic burden on any operator.

Related Service Information Under 1 CFR Part 51

The FAA reviewed the following service information.

Airbus Helicopters Alert Service Bulletin (ASB) No. AS365-63.00.26, Revision 0, dated July 22, 2020, for Model AS365N helicopters and non FAA-type certificated military Model AS365Fs helicopters; and Airbus Helicopters ASB No.

SA365-65.52, Revision 1, dated July 22, 2020, for Model SA-365C1 and SA-365C2 helicopters and non FAA-type certificated Model SA-365C3 helicopters. This service information specifies procedures for modifying the MGB T/R drive flange installation, which include installing a rear (aft) output stop between the T/R drive flange and T/R drive shaft. These documents are distinct since they apply to different helicopter models.

This AD also requires Airbus Helicopters ASB No. AS365-63.00.19, Revision 1, dated January 31, 2019; and Airbus Helicopters ASB No. EC155-63A013, Revision 1, dated January 31, 2019; which the Director of the Federal Register approved for incorporation by reference as of November 12, 2020 (85 FR 63440, October 8, 2020).

This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

Differences Between this AD and the EASA AD

EASA AD 2020-0287 specifies compliance times of 600 flight hours or a certain time frame (months). However, this AD only requires the compliance time of 600 hours time-in-service.

Costs of Compliance

The FAA estimates that this AD affects 53 helicopters of U.S. Registry. Labor rates are estimated at \$85 per work-hour. Based on these numbers, the FAA estimates the following costs to comply with this AD.

Estimated costs

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Modification (46 helicopters) (retained actions from AD 2020-21-01)	14 work-hours X \$85 per hour = \$1,190	\$2,704	\$3,894	\$179,124
Modification (new action)	14 work-hours X \$85 per hour = \$1,190	Up to \$18,474	Up to \$19,664	Up to \$1,042,192

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, Section 106, describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a "significant regulatory action" under Executive Order 12866,
- (2) Will not affect intrastate aviation in Alaska, and
- (3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by:

a. Removing Airworthiness Directive 2020-21-01, Amendment 39-21274

(85 FR 63440, October 8, 2020); and

b. Adding the following new airworthiness directive:

2021-26-18 Airbus Helicopters: Amendment 39-21877; Docket No. FAA-2021-0839; Project Identifier MCAI-2020-01697-R.

(a) Effective Date

This airworthiness directive (AD) is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

This AD replaces AD 2020-21-01, Amendment 39-21274 (85 FR 63440, October 8, 2020) (AD 2020-21-01).

(c) Applicability

This AD applies to the Airbus Helicopters model helicopters, certificated in any category, as identified in paragraphs (c)(1) through (3) of this AD.

(1) Model AS-365N2, AS 365 N3, and SA-365N1, all serial numbers on which Airbus Helicopters modification 0763B64 has been embodied, except those on which Airbus Helicopters modification 0763C81 has been embodied.

(2) Model SA-365C1, SA-365C2, and SA-365N, all serial numbers on which Airbus Helicopters modification 0763B64 has been embodied.

(3) Model EC 155B and EC155B1, all serial numbers, except those on which Airbus Helicopters modification 0763C81 has been embodied.

(d) Subject

Joint Aircraft Service Component (JASC) Code: 6500, Tail Rotor Drive System.

(e) Unsafe Condition

This AD was prompted by several reported occurrences of loss of tightening torque of the Shur-Lok nut, which serves as a retainer of the main gear box (MGB) tail rotor (T/R) drive flange. The FAA is issuing this AD to detect and address loss of tightening torque of the Shur-Lok nut. The unsafe condition, if not addressed, could result

in loosening of the Shur-Lok nut, possibly resulting in disengagement of the Shur-Lok nut threads, reduction of T/R drive control, rear transmission vibrations, and subsequent reduced control of the helicopter.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Required Actions

This paragraph restates the requirements of paragraph (e) of AD 2020-21-01 with no changes. Within 600 hours time-in-service after November 12, 2020 (the effective date of AD 2020-21-01):

(1) For Model AS-365N2, AS 365N3, and SA-365N1 helicopters:

(i) Without removing the tail drive shaft flange (a), remove the sliding flange (b) from the flexible coupling (c) as shown in Detail “B” of Figure 1, PRE MOD, of Airbus Helicopters Alert Service Bulletin (ASB) No. AS365-63.00.19, Revision 1, dated January 31, 2019 (ASB AS365-63.00.19, Revision 1); replace the 3 bolts (d) and remove from service the 3 washers (e).

(ii) Install the sliding flange (b) with aft output stop (1) part number (P/N) 365A32-7836-20 as shown in Detail “B” of Figure 1, POST MOD, of ASB AS365-63.00.19, Revision 1, and by following the Accomplishment Instructions, paragraph 3.B.2.b, of ASB AS365-63.00.19, Revision 1.

(2) For Model EC 155B and EC155B1 helicopters with modification 0763B64 embodied:

(i) Without removing the Shur-Lok nut (a), remove the sliding flange (b) from the flexible coupling (c) as shown in Detail “B” of Figure 1, PRE MOD, of Airbus Helicopters ASB No. EC155-63A013, Revision 1, dated January 31, 2019 (ASB EC155-63A013, Revision 1); replace the 3 bolts (d) and remove from service the 3 washers (e).

(ii) Install the sliding flange (b) with aft output stop (1) P/N 365A32-7836-20 as shown in Detail “B” of Figure 1, POST MOD, of ASB EC155-63A013, Revision 1, and by following the Accomplishment Instructions, paragraph 3.B.2.b, of ASB EC155-63A013, Revision 1.

Note 1 to paragraph (g)(2)(ii): ASB EC155-63A013, Revision 1 refers to the “aft output stop” as “rear output stop.”

(h) New Required Actions

For Model SA-365C1, SA-365C2, and SA-365N helicopters; and Model EC 155B and EC155B1 helicopters without modification 0763B64 embodied: Within 600 hours time-in-service after the effective date of this AD, modify the MGB T/R drive flange installation, in accordance with paragraph 3.B.2., “Procedure,” of the Accomplishment Instructions of the applicable service information specified in paragraphs (h)(1) through (3) of this AD, except as specified in paragraph (i) of this AD.

- (1) Airbus Helicopters ASB SA365-65.52, Revision 1, dated July 22, 2020.
- (2) Airbus Helicopters ASB AS365-63.00.26, Revision 0, dated July 22, 2020.
- (3) ASB EC155-63A013, Revision 1.

(i) Exceptions to Service Information

Where the service information identified in paragraph (h) of this AD specifies to discard certain parts, this AD requires removing those parts from service.

(j) Special Flight Permits

Special flight permits, as described in 14 CFR 21.197 and 21.199, are not allowed.

(k) Alternative Methods of Compliance (AMOCs)

(1) The Manager, International Validation Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the International Validation Branch, send it to the attention of the person identified in paragraph (l)(1) of this AD. Information may be emailed to: 9-AVS-AIR-730-AMOC@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(l) Related Information

(1) For more information about this AD, contact Andrea Jimenez, Aerospace Engineer, COS Program Management Section, Operational Safety Branch, Compliance & Airworthiness Division, FAA, 1600 Stewart Ave., Suite 410, Westbury, NY 11590; phone: (516) 228-7330; email: andrea.jimenez@faa.gov.

(2) The subject of this AD is addressed in European Union Aviation Safety Agency (EASA) AD 2020-0287, dated December 21, 2020. You may view the EASA AD at <https://www.regulations.gov> in Docket No. FAA-2021-0839.

(m) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(3) The following service information was approved for IBR on [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(i) Airbus Helicopters Alert Service Bulletin (ASB) No. AS365-63.00.26, Revision 0, dated July 22, 2020.

(ii) Airbus Helicopters ASB No. SA365-65.52, Revision 1, dated July 22, 2020.

(4) The following service information was approved for IBR on November 12, 2020 (85 FR 63440, October 8, 2020).

(i) Airbus Helicopters ASB No. AS365-63.00.19, Revision 1, dated January 31, 2019.

(ii) Airbus Helicopters ASB No. EC155-63A013, Revision 1, dated January 31, 2019.

(5) For Airbus Helicopters service information identified in this AD, contact Airbus Helicopters, 2701 North Forum Drive, Grand Prairie, TX 75052; phone: (972) 641-0000 or (800) 232-0323; fax: (972) 641-3775; or at <https://www.airbus.com/helicopters/services/support.html>.

(6) You may view this service information at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy., Room 6N-321, Fort Worth, TX

76177. For information on the availability of this material at the FAA, call (817) 222-5110.

(7) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, email: fr.inspection@nara.gov, or go to: <https://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued on December 15, 2021.

Lance T. Gant, Director,
Compliance & Airworthiness Division,
Aircraft Certification Service.

[FR Doc. 2021-28471 Filed: 1/4/2022 8:45 am; Publication Date: 1/5/2022]